

t19_pdiff_6

(TMJiZP2rE12bhFJHmxbM9DWVgWGtsdMzQks)

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Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_euclid : \iota \Rightarrow \iota$ be given. Let $m2_finseq_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $r1_pdiff_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k8_pdiff_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_pdiff_6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2_pdiff_6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k4_real_ns1 : \iota \Rightarrow \iota$ be given. Let $v13_vectsp_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_lopban_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0.((\neg v1_xboole_0 X0) \wedge (m1_subset_1 X0 k5_numbers)) \Rightarrow \\
 & (\forall X1.((\neg v1_xboole_0 X1) \wedge (m1_subset_1 X1 k5_numbers)) \Rightarrow \\
 & (\forall X2.((v1_funct_1 X2) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\
 & (k1_euclid X0) (k1_euclid X1)))))) \Rightarrow (\forall X3.(m2_finseq_2 X3 \\
 & k1_numbers (k1_euclid X0)) \Rightarrow ((r1_pdiff_1 X0 X1 X2 X3) \Rightarrow ((v1_funct_1 \\
 & (k8_pdiff_1 X0 X1 X2 X3)) \wedge ((v1_funct_2 (k8_pdiff_1 X0 X1 X2 X3) (\\
 & u1_struct_0 (k4_real_ns1 X0)) (u1_struct_0 (k4_real_ns1 X1)))) \wedge \\
 & ((v13_vectsp_1 (k8_pdiff_1 X0 X1 X2 X3) (k4_real_ns1 X0) (k4_real_ns1 \\
 & X1)) \wedge ((v1_lopban_1 (k8_pdiff_1 X0 X1 X2 X3) (k4_real_ns1 X0) (k4_real_ns1 \\
 & X1)) \wedge (m1_subset_1 (k8_pdiff_1 X0 X1 X2 X3) (k1_zfmisc_1 (k2_zfmisc_1 \\
 & (u1_struct_0 (k4_real_ns1 X0)) (u1_struct_0 (k4_real_ns1 X1))))))))))
 \end{aligned}$$

(1)

Assume the following.

$$\begin{aligned}
& \forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow (\forall X1.(m1_subset_1 \\
& X1 k5_numbers) \Rightarrow (\forall X2.((v1_funct_1 X2) \wedge ((v1_funct_2 X2 \\
& (k1_euclid X0) (k1_euclid X1)) \wedge ((v1_pdiff_6 X2 X1 X0) \wedge ((v2_pdiff_6 \\
& X2 X1 X0) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 (k1_euclid \\
& X0) (k1_euclid X1)))))) \Leftrightarrow ((v1_funct_1 X2) \wedge ((v1_funct_2 X2 (\\
& u1_struct_0 (k4_real_ns1 X0)) (u1_struct_0 (k4_real_ns1 X1))) \wedge \\
& ((v13_vectsp_1 X2 (k4_real_ns1 X0) (k4_real_ns1 X1)) \wedge ((v1_lopban_1 \\
& X2 (k4_real_ns1 X0) (k4_real_ns1 X1)) \wedge (m1_subset_1 X2 (k1_zfmisc_1 \\
& (k2_zfmisc_1 (u1_struct_0 (k4_real_ns1 X0)) (u1_struct_0 (k4_real_ns1 \\
& X1))))))))))))) \\
& \tag{2}
\end{aligned}$$

Theorem 1

$$\begin{aligned}
& \forall X0.((\neg v1_xboole_0 X0) \wedge (m1_subset_1 X0 k5_numbers)) \Rightarrow \\
& (\forall X1.((\neg v1_xboole_0 X1) \wedge (m1_subset_1 X1 k5_numbers)) \Rightarrow \\
& (\forall X2.((v1_funct_1 X2) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\
& (k1_euclid X0) (k1_euclid X1)))))) \Rightarrow (\forall X3.(m2_finseq_2 X3 \\
& k1_numbers (k1_euclid X0)) \Rightarrow ((r1_pdiff_1 X0 X1 X2 X3) \Rightarrow ((v1_funct_1 \\
& (k8_pdiff_1 X0 X1 X2 X3)) \wedge ((v1_funct_2 (k8_pdiff_1 X0 X1 X2 X3) (\\
& k1_euclid X0) (k1_euclid X1)) \wedge ((v1_pdiff_6 (k8_pdiff_1 X0 X1 X2 \\
& X3) X1 X0) \wedge ((v2_pdiff_6 (k8_pdiff_1 X0 X1 X2 X3) X1 X0) \wedge (m1_subset_1 \\
& (k8_pdiff_1 X0 X1 X2 X3) (k1_zfmisc_1 (k2_zfmisc_1 (k1_euclid X0) \\
& (k1_euclid X1)))))))))))))
\end{aligned}$$